

WHAT IS CLAIMED IS:

1. A method for ultrasonically measuring a volumetric object of a body comprising:
5 acquiring ultrasonic images of the volumetric object in two intersecting image planes at substantially the same time with an ultrasound probe (110);
using an automated processor (470) to define corresponding object borders (210, 214) in the ultrasonic images; and
producing quantified measures of the volumetric object from the defined
10 object borders (210, 214).
2. The method of Claim 1, further comprising producing a graphical model (220) of the volumetric object using the defined object borders (210, 214); and
wherein producing quantified measures further comprises producing quantified measures
15 using the graphical model (220).
3. The method of Claim 1, further comprising producing a display comprising real time images from the two intersecting image planes with a visually highlighted defined object border (210, 214) in each image and a quantified measure
20 using the defined object border of the images.
4. The method of Claim 3, wherein producing a display comprising a quantified measure further comprises producing a display of changes in the volumetric object as a function of time.
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5. The method of Claim 3, wherein the display of changes in the volumetric object as a function of time comprises a graphical display, a numerical display or both a graphical and numeric display (220).
- 30 6. The method of Claim 1, wherein acquiring ultrasonic images comprises acquiring ultrasonic images of a chamber of the heart,
wherein the corresponding object borders (210, 214) comprise the wall of the chamber of the heart.

7. The method of Claim 2, further comprising producing a display (150) comprising real time images from the two intersecting image planes with a visually highlighted defined object border in each image, a real time graphical model using the defined object borders, and a quantified measure using the defined object border of the images.

8. The method of Claim 2, wherein producing quantified measures further comprises using the graphical model (220) to produce a volumetric measure by the rule of disks.

9. The method of Claim 2, wherein producing a graphical model (220) comprises fitting a series of curves to a wire frame structure formed by the defined object borders.

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10. The method of Claim 9, wherein the curves comprise ellipses or hemi-ellipses.

11. A method for ultrasonically measuring a volumetric object of a body comprising:

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acquiring ultrasonic images of the volumetric object in two intersecting image planes at substantially the same time with an ultrasound probe (110);

using an automated processor (470) to define corresponding object borders (210, 214) in the ultrasonic images; and

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producing a graphical model (220) of the volumetric object using the defined object borders.

12. The method of Claim 11, wherein using an automated processor (470) further comprises using an automated processor (470) to automatically trace corresponding object borders in the ultrasonic images; and wherein producing a graphical model (220) comprises producing a wireframe model by fitting a series of curves to the traces in their corresponding image planes.

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13. The method of Claim 12, wherein the series of curves further comprise a series of ellipses.

14. The method of Claim 12, wherein producing a graphical model
5 (220) further comprises fitting a surface to the wireframe model.

15. The method of Claim 12, further comprising producing quantified measures of the graphical model by the rule of disks.

10 16. The method of Claim 11, further comprising producing a display (150) comprising real time images from the two intersecting image planes with a visually highlighted defined object border in each image and a real time graphical model (220) using the defined object borders.

15 17. The method of Claim 11, wherein acquiring comprises acquiring ultrasonic images of the volumetric object in two or more intersecting image planes at substantially the same time with an ultrasound probe (110).